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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/628,070 | 07/25/2003 | Karl-Heinz Kuebler | VWS-555-A | 3124 |

7590 01/25/2005
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EXAMINER

CAMPBELL, THOR S

ART UNIT PAPER NUMBER

3742

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/628,070 | KUEBLER ET AL. | |
| | Examiner | Art Unit | |
| | Thor S. Campbell | 3742 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5/24/04, 7/25/03</u> | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 8, 9, 12, 14-16 and 18 are rejected under 35 USC 102(b) as being anticipated by Wade.

Wade discloses an apparatus for heating fluid including a fluid source for supplying fluid for discharging from the reservoir; a heater means comprising a thermally conductive mass (10) heating means (12), thermally coupled to the thermally conductive mass, imparting heat to the thermally conductive mass a fluid flow path formed in the mass between an inlet and an outlet, the fluid flow path coupled in heat transfer relation to the heating means so that fluid in the fluid flow path absorbs heat from the thermally conductive mass.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 USC 103(a) as unpatentable over Wade in view of Cassidy.

Wade discloses an apparatus for heating fluid including a fluid source for supplying fluid for discharging from the reservoir; a heater means comprising a thermally conductive mass (10) heating means (12), thermally coupled to the thermally conductive mass, imparting heat to the thermally conductive mass a fluid flow path formed in the mass between an inlet and an outlet, the fluid flow path coupled in heat transfer relation to the heating means so that fluid in the fluid flow path absorbs heat from the thermally conductive mass. Wade does not explicitly disclose a control means, connected to the heating means, for activating the heating means; and a thermally conductive medium coupled in heat transfer relationship between at least a portion of the control means and the thermally conductive.

Cassidy discloses *inter alia* a fluid heater comprising a fluid flow channel and a control means (104) connected to the heating means, for activating the heating means; and a thermally conductive medium (134) coupled in heat transfer relationship between at least a portion of the control means and the flow channel. It would have been obvious to one of ordinary skill in the art at the time the invention was made, in view of Cassidy, to modify the device of Wade to include *inter alia* a printed circuit board for controlling the heater, and to place the PCB in contact with the thermally conductive mass via a thermally conductive medium in order to maintain the compactness of the heating device while using waste heat generated by the control components to further heat.

Claims 5-7, 10-11, and 17 are rejected under 35 USC 103(a) as unpatentable over Wade in view of Rochitelli.

Wade discloses an apparatus for heating fluid including a fluid source for supplying fluid for discharging from the reservoir; a heater means comprising a thermally conductive mass (10)

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heating means (12), thermally coupled to the thermally conductive mass, imparting heat to the thermally conductive mass a fluid flow path formed in the mass between an inlet and an outlet, the fluid flow path coupled in heat transfer relation to the heating means so that fluid in the fluid flow path absorbs heat from the thermally conductive mass. Wade does not explicitly disclose a control means, connected to the heating means, for activating the heating means; and a thermally conductive medium coupled in heat transfer relationship between at least a portion of the control means and the thermally conductive.

Roccitelli discloses an apparatus for heating fluid including a fluid source for supplying fluid for discharging from the reservoir; a heater means comprising a thermally conductive mass (1) heating means (36), thermally coupled to the thermally conductive mass, imparting heat to the thermally conductive mass a fluid flow path formed in the mass between an inlet and an outlet, the fluid flow path coupled in heat transfer relation to the heating means so that fluid in the fluid flow path absorbs heat from the thermally conductive mass, a control means (39), connected to the heating means, for activating the heating means; and a thermally conductive medium (28, 29) coupled in heat transfer relationship between at least a portion of the control means and the thermally conductive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thor S. Campbell whose telephone number is 571-272-4776. The examiner can normally be reached on Mon-Fri 5:30AM-2:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TSC



**THOR S. CAMPBELL
PRIMARY EXAMINER**